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ABSTRACT

The purpose of this longitudinal study was to ascertain whether or not prospective teachers' anxiety about teaching decreased through teacher training and the first year of teaching in accord with teacher development theory and whether or not longitudinal changes in anxiety about teaching were associated with selected academic ability and personal attributes of the teachers. A longitudinal sample of 63 subjects completed a measure of teaching anxiety upon commencement of their teacher training, after student teaching, and near the completion of their first year of full-time teaching. One- and two-factor repeated measures ANOVA procedures revealed that teaching anxiety decreased during teacher training and was related to the teachers' basic academic skills level, grades earned in education, locus of control orientation, and perceptions of the quality of their university training. The teachers with more anxiety about teaching evaluated the quality of their university training less positively than did those with less teaching anxiety; less academically able teachers expressed more anxiety about teaching at the beginning of teacher training than did the more academically able; and teachers with an internal as compared to an external locus of control expressed less anxiety about teaching during training and comparatively even less at the end of their first year of teaching. (JD)

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Relationships Between Teachers' Academic and Personality Attributes and Changes in Teaching Anxiety During Training and Early Teaching

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Abstract

The purpose of this longitudinal study was to ascertain whether or not prospective teachers' anxiety about teaching decreased through teacher training and the first year of teaching in accord with teacher development theory and whether or not longitudinal changes in anxiety about teaching was associated with selected academic ability and personal attributes of the teachers. One- and two-factor repeated measures ANOVA procedures revealed that teaching anxiety decreased during teacher training and was found to be related to the teachers' basic academic skills level, grades earned in education, locus of control orientation, and their perceptions of the quality of their university training. The teachers with more anxiety about teaching were found to evaluate the quality of their university training less positively than did those with less teaching anxiety; less academically able teachers expressed more anxiety about teaching at the beginning of teacher training than did the more academically able; and teachers with an internal as compared to an external locus of control expressed less anxiety about teaching during training and comparatively even less at the end of their first year of teaching.

Relationships Between Teachers' Academic and Personality Attributes and Changes in Teaching Anxiety During Training and Early Teaching

The socialization of prospective teachers into the teaching profession is considered to be traumatic for many neophyte teachers and is characterized by the experiencing of reality shock. Many educators have hypothesized that insufficient preservice field experiences is a major contributor to the job entry reality shock syndrome, but sociologists such as Lortie (1975) and Carroll (1981) view teacher socialization in much broader perspectives. They describe teaching as an imperiled profession with a teaching climate of loneliness and powerlessness, a profession lacking a codified body of knowledge and skills, a profession where development is perceived as resulting from learning by doing rather than from formal training, and a complex and demanding profession with high levels of stress, anxiety, burnout, and turnover.

Sociologists view the teacher socialization process as resulting from the interaction of individual teacher and school organization expectations and inputs (Quaglia & Rog, 1989). Beginning teachers, themselves, bring to the process inputs such as extent of training, personal life experiences, classroom management expectations, and knowledge of teaching

method-subject matter. The school organization contributes to the socialization process inputs such as the guidance and support of the principal, the sharing of the "tricks of the trade" by teacher colleagues, the nature of the teaching assignment, and institutional policies and practices.

The dynamism of the teacher socialization process evolves from the interactions between the beginning teachers' inputs and expectations and the school organization's inputs and expectations with both the individual and the organization changing from these continuing interactions. Expectations met lead to mutual satisfaction and successful employment; unmet expectations result in stress and anxiety leading eventually to termination of employment.

Theoretically, the successful preparation and induction of teacher candidates into the profession should result in a reduction of trait specific anxiety such as measured by the Teaching Anxiety Scale (Parsons, 1973). Limited research suggests that this is the case at least during the initial training of teacher candidates (Pigge & Marso, 1987; Poole & Gaudry, 1974; Silvernail & Costello, 1983) and for cross-sectional samples of beginning teachers.

Further, one would hypothesize that the presence of trait anxiety within those teachers remaining in the profession would have some impact upon their teaching behavior and perhaps result

in some impact on pupil behavior. Limited research also suggests that that is the case. For example, Harootunian and Koon (1970) found that teachers with high levels of anxiety provided less verbal support for their pupils; Clark (1972) reported that teachers with high levels of anxiety assigned lower grades to their pupils; Crame (1974) and Krasno (1972) found that teachers with lower levels of anxiety had higher levels of job satisfaction and persisted longer in the profession; Kracht and Casey (1968), Krasno (1972), Doyal and Forsyth (1973), and Moskowitz and Hayman (1974) found that teachers' level of anxiety was positively related to their pupils' level of anxiety and to their rapport with and acceptance of their pupils. Finally, Osborne (1973) found that teachers' anxiety was related to the academic performance of their pupils, and Parkay, Greenwood, Olejnik, and Proller (1988) reported that teachers with low stress or anxiety had fewer discipline problems in their classes and better relationships with superiors, colleagues, and students' parents.

The purpose of the present study was to ascertain whether or not teaching anxiety for individuals decreases during teacher training and the first year of teaching experience in accord with teacher development theory and whether or not selected academic ability indices and personal characteristics were associated with any longitudinal changes in teachers' anxiety

about teaching as they commenced teacher training, completed student teaching, and approached the end of their first year of full-time teaching. More specifically this study was designed to test the following hypotheses: 1) The teachers' anxiety about teaching will decrease as they progress through teacher training and the first year of teaching. 2) The teachers' anxiety about teaching will not be related to these academic ability indices: student teaching performance ratings, grade point averages, American College Test (ACT) scores, and Comprehensive Test of Basic Skills (CTBS) scores. 3) The teachers' anxiety about teaching will not be related to these personal attributes: gender, grade level of instruction (elementary and secondary), earliness of their decision to choose teaching as a career (prior to, during, and after high school), perception of the quality of their university training (grade evaluations of A, B, and C), personality type (Myers-Briggs Type Indicator), and their locus of control orientation (Rotter's internal or external).

Method

The subjects for this longitudinal study consisted of 63 Bowling Green State University students who began their teacher training in 1985 and who by June 30, 1989 had completed their first year of full-time classroom teaching. These individuals completed the Teaching Anxiety Scale (Parsons, 1973) upon the

commencement of their teacher training, following their student teaching experience, and near the end of their first year of full-time teaching.

The Teaching Anxiety Scale is comprised of 29 items with a response continuum for each item from never (1) to always (5) with higher scores indicating more anxiety about teaching. Parsons (1973) reported a test-retest coefficient of stability of .95 and alpha internal consistency coefficients within a range of .87 to .94 for this scale. She also reported concurrent validity evidence in the form of correlations between scores derived from this scale and scores from several anxiety instruments (coefficients from .25 to .62) and in the form of correlations between the scores of preservice teacher interns and perceived ratings of their anxiety about teaching by the teachers who supervised them (coefficients from .24 to .54).

In addition to the measurement of teaching anxiety, the following qualitative and quantitative data were gathered for the individuals: American College Test (ACT) and Comprehensive Test of Basic Skills (CTBS) composite scores, university and education grade point averages, Rotter's (1966) locus of control measure, university supervisors' ratings of their student teaching performance, Myers-Briggs Type Indicator personal preference classifications (Myers & McCaulley, 1985), gender, grade level of instruction, when they decided to choose teaching

as a career, and the teachers' evaluations of the training they received at BGSU.

The data collected from the subjects were analyzed through the use of one- and two-factor ANOVAs with repeated measures on one factor. The teaching anxiety scores were used as the dependent variable, with the three anxiety measurement points during the teachers' development (prior to and following training and at the end of the first year of teaching) used as one independent variable (column classification), and with the teachers' academic ability indices and personal attributes used as second independent variables (row classifications).

The specific row classifications used in the 2X3 and 3X3 repeated measures ANOVA procedures for the academic ability indices and personal attribute classifications were: high and low halves of the ranked academic ability indices derived from the ACT and CTBS composite scores, university and education grade point averages, and the student teaching performance ratings; the dichotomous personal attribute classifications of gender, grade level (elementary or secondary), Myers-Briggs' four personal preference types (extraversion-introversion, sensing-intuition, thinking-feeling, and judging-perceptive), and Rotter's internal-external locus of control; and the three category personal attributes of the teachers' ratings of the quality of their university training (reported as grades of A,

B, and C) and of when the subjects decided to become teachers (prior to, during, and following their high school years).

Findings

The one-factor repeated measures ANOVA of the teaching anxiety scores obtained at the three measurement points in teacher development indicated that the subjects became less anxious about teaching during their teacher training and appeared to maintain that reduced level of anxiety through their first year of teaching. The mean pattern for this analysis was 77.9, 62.9, and 64.5, respectively over the three measurement points ($F = 36.79$, $p < .001$) as reported in Table 1.

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Insert Table 1 about here

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The two-factor repeated measures ANOVA procedures revealed significant F-ratios for four (row) classifications. Two personal attribute and one academic ability index classifications revealed significant (row) mean differences in teaching anxiety, and time of testing by CTBS level produced a significant interaction effect as shown in Table 2.

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Insert Table 2 about here

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Those teachers who perceived themselves as having more control over their environment (internal locus of control) reported less anxiety about teaching (means of 73.2, 60.1, and 59.5) than did those who perceived themselves as not having as much control over their environment (means of 79.7, 64.9, and 68.7). The respective average or overall means were 64.3 and 71.1, resulting in an F-ratio of 10.13, $p < .001$. It appeared from the mean patterns for these two groups that the subjects with an external locus of control reported a higher level of anxiety at each of the three measurement times; that both those with internal and external locus of controls had less anxiety about teaching after teacher training; and that the subjects with an external locus of control reported a slight increase in anxiety about teaching at the end of their first year of teaching while the anxiety level for the subjects with an internal locus of control remained rather constant through teacher training and the first year of teaching.

Those subjects who assigned a grade of 'A' to their university training were less anxious about teaching as compared to those assigning 'B' ($F = 4.76$, $p = .01$). This was especially evident on the measurements taken at the end of the first year of teaching (anxiety mean of 59.1 for those assigning A's versus a mean of 66.6 for those assigning B's) as shown in Table 2.

The two academic ability classifications which revealed significant mean anxiety differences between the groups of subjects were the basic academic skills measure (CTBS) and the education grade point average. The teacher candidates earning lower education grades reported higher levels of test anxiety at each measurement point (means of 81.5, 64.6, and 67.2, respectively) than did those earning higher education grades (means of 74.6, 61.4, and 62.0, respectively). These overall group anxiety means were 71.1 and 66.0, respectively. Both groups reported less anxiety about teaching after training but apparently little or no change occurred in level of anxiety for these two groups during the first year of teaching.

Both the higher and lower CTBS basic academic skills groups reported less anxiety after training, but the levels of anxiety reported by both groups were more equivalent after student teaching and after the first year of teaching than they were at the commencement of training. This pattern of means produced a significant interaction effect between the CTBS classification and the three measurement points during teacher development ($F = 4.75$, $p = .01$). (There was not a significant difference between the overall anxiety means [66.6 and 69.3, respectively] of these two groups [$F = 1.37$, $p = .25$] formed from their CTBS scores.) In other words, both groups of teacher candidates experienced a decrease in anxiety about teaching during training

but the decrease in anxiety during teacher training for the low CTBS group was much larger than the decrease reported by the high CTBS group (see the means presented in Table 2).

Summary and Discussion

A longitudinal sample of 63 subjects completed a measure of teaching anxiety upon commencement of their teacher training, after student teaching, and again near the completion of their first year of full-time teaching. In accord with teacher development theory, the prospective teachers reported a decrease in anxiety after teacher training as they increased their knowledge and skills related to teaching. These teachers, however, did not report a further reduction in anxiety about teaching near the end of their first year of teaching as might have been expected. Regardless, the finding of a decrease in their anxiety about teaching during teacher development resulted in the acceptance (non-rejection) of the first hypothesis of this study.

The teachers' level of anxiety about teaching was found to be related to their basic academic skills as indicated by their Comprehensive Test of Basic Skills scores and also as indicated by the grade point averages they earned in their education classes. Conversely, the prospective teachers' level of anxiety about teaching was not found to be related to the other academic ability indices selected for study, namely, their ACT scores,

their student teaching performance ratings, and their overall university grade point averages.

The subjects who earned lower education grade point averages and lower CTBS scores reported higher levels of teaching anxiety at all three points in teacher development than did those with higher CTBS scores and higher education grade point averages. Both the high and low basic academic skills groups of teachers reported less teaching anxiety after teacher training as compared to at the commencement of training, and both of these groups reported approximately the same levels of teaching anxiety near the end of their first year of teaching as compared to following teacher training. Initially, however, the low CTBS and low grade point average teacher candidates began teacher training with much higher levels of anxiety about teaching than had those teacher candidates with high CTBS and high grade point averages. The finding of these relationships between teachers' academic ability indices and the levels of their reported teaching anxiety led to the rejection of the second hypothesis.

Two of the selected personal attributes of the prospective teachers, their perceptions of the quality of their university training and their locus of control orientation, were found to be related to the levels of their reported teaching anxiety. The other personal attributes of gender, instructional level,

time of their decision to choose teaching as a career, and the Myers-Briggs preferences, however, were not found to be related to the anxiety levels of these novice teachers.

The subjects with an internal locus of control (those feeling that they have relatively more control over their environment) reported lower levels of teaching anxiety when compared to those with an external locus of control (those feeling that they have relatively less control over their environment) at each of the three measurement points during teacher development. Both of these groups also showed an initial decrease in anxiety near the end of teacher training but their anxiety about teaching apparently did not continue to decrease during their first year of teaching.

The neophyte teachers who assigned an 'A or 'B' evaluation to their university training began their training with comparable levels of reported anxiety about teaching; both of these groups reported a decrease in anxiety near the end of teacher training but the anxiety levels for neither group appeared to decrease during the first year of teaching. However, those neophyte teachers who assigned 'A's' to the quality of their teacher training reported less anxiety after training and again after teaching as compared to those assigning 'B's' to their university training. The finding of these relationships between the prospective teachers' personal

attributes and the levels of their anxiety about teaching led to the rejection of the third hypothesis.

The finding of a relationship between teaching anxiety and the teachers' locus of control during their development as teachers would appear to be important as other researchers have identified relationships between classroom teachers' locus of control and their teaching behavior (e.g, Parkay, Greenwood, Olejnik, & Proller [1988]; Sadowski, Blackwell, & Willard [1986]; McIntyre [1984]; Meadow [1981]). Generally, these researchers described internally controlled and less anxious teachers as having fewer classroom discipline problems, having fewer intrapersonal conflicts, and having better relations with superiors, colleagues, and students' parents than their more stressful and externally controlled colleagues.

Relatedly, Ashton, Webb, and Doda (1983) reported positive relationships between classroom teachers' feelings of self-efficacy and feelings of internal locus of control and a tendency for teachers with an internal as opposed to an external locus of control to accept more personal responsibility for their pupils' success. Further, Murray and Staebler (1974) found that those teachers reporting feelings of internal as opposed to external locus of control had higher achieving pupils.

The finding of a relationship between teaching anxiety and teachers' perceptions of the quality of their training would appear to be consistent with the construct of anxiety and the assumption that high levels of anxiety have a negative impact upon individuals' perceptions of their environment. In other words, one might expect more anxious neophyte teachers to be more critical than their less anxious colleagues about the quality of their teacher training. Similarly, the interaction effect for anxiety about teaching found between the levels of the teachers' basic academic skills (CTBS scores) and the three measurement points during teacher development would seem logical and consistent with anxiety theory. Less success in similar prior experiences, in this case during earlier education, would be expected to generate more anxiety about impending similar experiences, in this case further education. Thus, one would expect higher initial levels of anxiety about teaching for those teacher candidates entering teacher training with lower CTBS skills as compared to those with higher CTBS skills. Apparently, however in the present study, those with lower CTBS scores who found success in their teacher training program decreased their level of anxiety about teaching to a level comparable to their more academically skilled colleagues and apparently maintained this comparable level of anxiety to the end of their first year of teaching.

The relationship identified between the teachers' education grade point averages and their levels of teaching anxiety suggesting that those teachers having earned lower grades expressed more anxiety about teaching also appears logical; however, why similar relationships were not found between the levels of their teaching anxiety and their university grades, ACT scores, and student teaching performance ratings is not as readily apparent. One explanation might be that the more general university grades and ACT scores are less immediately associated with the process of teaching than are basic academic skills and education class grades.

In summation, the findings from the present longitudinal study support the contention that prospective teachers' anxiety about teaching does decrease during training as they develop teaching knowledge and skills, and, perhaps as significantly, an increased level of teaching anxiety is not reported after the first year of teaching which is commonly described as a traumatic and reality shocking socialization period for neophyte teachers. Secondly, these findings provide further insight into selected academic and personal attributes that are likely to influence teachers' development and perhaps even teachers' subsequent classroom behaviors. Within this latter context evidence was gathered which suggests that teachers' feelings of control over their environment and teachers' academic success

during training very likely influence the intensity of their anxiety about teaching.

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Table 1

Anxiety Means and F-Ratio for Three Measurement Points During Teacher Development

	Before Training	After Student Teaching	After First Year Teaching	F	p
Mean	77.9	62.9	64.5		
N	63	63	63	36.79	.001
SD	13.79	10.91	10.36		

Table 2

Anxiety Means for Three Measurement Points During Teacher Development and Related F-Ratios for Various Subject Classifications

Classification	N*	Before Training	After Training	After Teaching	Overall Mean	F	p
Locus of Control							
Internals	21	73.2	60.1	59.5	64.3	10.13	.001
Externals	22	79.7	64.9	68.7	71.1		
Candidates' Evaluation of Training							
'A' grade	21	77.0	59.3	59.1	65.1	4.76	.01
'B' grade	37	77.0	64.3	66.6	69.3		
Education Classes GPA							
Bottom one-half	30	81.5	64.6	67.2	71.1	7.43	.01
Top one-half	33	74.6	61.4	62.0	66.0		
Comprehensive Test of Basic Skills							
Bottom one-half	19	82.4	61.4	64.2	69.3	1.37	.25
Top one-half	25	71.5	62.2	66.0	66.6		
(Interaction F = 4.75, $p < .01$)							

*Sample sizes varied somewhat as not all information was available for all teacher candidates.